

satisfied that a sufficient level of safety exists.

§ 117.208 Survival craft—vessels operating on rivers routes.

(a) Except as allowed by paragraph (c), (d), or (e) of this section, each vessel certificated to operate on a rivers route in cold water must be provided with life floats of an aggregate capacity that will accommodate at least 50% of the total number of persons permitted on board.

(b) Each vessel certificated to operate on a rivers route in warm water is not required to carry survival craft.

(c) Each vessel certificated to operate on a rivers route within one mile of land is not required to carry survival craft.

(d) For a vessel certificated to operate on a rivers route in shallow water where the vessel can not sink deep enough to submerge the topmost passenger deck or where survivors can wade ashore, the cognizant OCMI may waive a requirement for life floats, if the OCMI determines that it is safe to do so, taking into consideration the vessel's scope of operation, hazards of the route, and availability of assistance.

(e) Each vessel operating with a set schedule on a specific route that maintains a 15 minute radio communications schedule with an operations base, or participates in a Vessel Traffic Service (VTS), may be granted a reduction in the survival craft requirements of this section if the cognizant OCMI is satisfied that a sufficient level of safety exists.

§ 117.210 Rescue boats.

(a) Each vessel must carry at least one rescue boat unless the cognizant OCMI determines that:

(1) The vessel is sufficiently maneuverable, arranged, and equipped to allow the crew to recover a helpless person from the water;

(2) Recovery of a helpless person can be observed from the operating station; and

(3) The vessel does not regularly engage in operations that restrict its maneuverability.

(b) In general, a rescue boat must be a small, light-weight boat with built-in

buoyancy and be capable of being readily launched and easily maneuvered. In addition, it must be of adequate proportion to permit taking an unconscious person on board without capsizing.

(c) On a vessel of more than 19.8 meters (65 feet) in length operating on protected waters, a rescue boat approved under approval series 160.056 is acceptable in meeting the intent of this section. On a vessel of more than 19.8 meters operating on exposed or partially protected waters, a rescue boat approved under approval series 160.156 is acceptable in meeting the intent of this section. On a vessel of not more than 19.8 meters (65 feet) in length, a required rescue boat must be acceptable to the cognizant OCMI.

[CGD 85-080, 61 FR 911, Jan. 10, 1996, as amended by 62 FR 51351, Sept. 30, 1997; 62 FR 64305, Dec. 5, 1997]

PART 118—FIRE PROTECTION EQUIPMENT

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SOURCE: CGD 85-080, 61 FR 917, Jan. 10, 1996, unless otherwise noted.

Subpart A—General Provisions

§ 118.115 Applicability; preemptive effect.

(a) Except as otherwise required by paragraphs (b) and (c) of this section, an existing vessel must comply with the fire protection equipment regulations applicable to the vessel on March 10, 1996, or, as an alternative, the vessel may comply with the regulation in this part.

(b) An existing vessel with a hull, or a machinery space boundary bulkhead or deck, composed of wood or fiber reinforced plastic, or sheathed on the interior in fiber reinforced plastic, must comply with the requirements of § 118.400 of this part on or before March 11, 1999.

(c) New installations of fire protection equipment on an existing vessel, which are completed to the satisfaction of the cognizant Officer in Charge, Marine Inspection (OCMI) on or after March 11, 1996, must comply with the regulations of this part. Replacement of existing equipment installed on the vessel prior to March 11, 1996, need not comply with the regulations in this part.

(d) The regulations in this part have preemptive effect over State or local regulations in the same field.

[CGD 85-080, 61 FR 917, Jan. 10, 1996, as amended by USCG-2006-24797, 77 FR 33883, Jun. 7, 2012]

§ 118.120 Equipment installed but not required.

Fire extinguishing and detecting equipment installed on a vessel in excess of the requirements of §§ 118.400 and 118.500 of this part must be designed, constructed, installed and maintained in a manner acceptable to the Commandant.

Subpart B [Reserved]

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Subpart C—Fire Main System

§ 118.300 Fire pumps.

(a) A self priming, power driven fire pump must be installed on each vessel.

(b) On a vessel without overnight accommodations, or with overnight accommodations for not more than 49 passengers, the fire pump must be capable of delivering a single hose stream from the highest hydrant, through the hose and nozzle required by § 118.320 of this part, at a pitot tube pressure of 345 kPa (50 psi).

(c) On a vessel carrying more than 600 passengers or with overnight accommodations for more than 49 passengers, the fire pump must meet § 76.10-5 of this chapter.

(d) A fire pump may be driven by a propulsion engine. A fire pump must be permanently connected to the fire main and may be connected to the bilge system to meet the requirements of § 119.520 of this subchapter.

(e) A fire pump must be capable of both remote operation from the operating station and local operation at the pump.

[CGD 85-080, 61 FR 917, Jan. 10, 1996; 61 FR 20556, May 7, 1996, as amended at 62 FR 51351, Sept. 30, 1997]

§ 118.310 Fire main and hydrants.

(a) Except as required by paragraph (d) of this section, a vessel must have a sufficient number of fire hydrants to reach any part of the vessel using a single length of fire hose.

(b) Piping, valves, and fittings in a fire main system must comply with part 119, subpart G of this subchapter.

(c) Each fire hydrant must have a valve installed to allow the fire hose to be removed while the fire main is under pressure.

(d) On a vessel carrying more than 600 passengers or with overnight accommodations for more than 49 passengers, the fire main and hydrants must meet § 76.10-10 of this chapter.

[CGD 85-080, 61 FR 917, Jan. 10, 1996, as amended at 62 FR 51351, Sept. 30, 1997]

§ 118.320 Fire hoses and nozzles.

(a) A fire hose with a nozzle must be attached to each fire hydrant at all times. For fire hydrants located on

open decks or cargo decks, where no protection is provided, hoses may be temporarily removed during heavy weather or cargo handling operations, respectively. Hoses so removed must be stored in nearby accessible locations.

(b) Each hose must:

(1) Be lined commercial fire hose that conforms to Underwriters Laboratory (UL) 19 "Lined Fire Hose and Hose Assemblies," or hose that is listed and labeled by an independent laboratory recognized by the Commandant as being equivalent in performance;

(2) Be 15.25 meters (50 feet) in length and 40 millimeters (1.5 inches) in diameter; and

(3) Have fittings of brass or other suitable corrosion-resistant material that comply with National Fire Protection Association (NFPA) 1963 "Fire Hose Connections," or other standard specified by the Commandant.

(c) Each nozzle must either:

(1) Be of a type approved in accordance with approval series 162.027; or

(2) Be of type recognized by the Commandant as being equivalent in performance.

[CGD 85-080, 61 FR 917, Jan. 10, 1996; 61 FR 24464, May 15, 1996, as amended at 62 FR 51351, Sept. 30, 1997; 62 FR 64305, Dec. 5, 1997]

Subpart D—Fixed Fire Extinguishing and Detecting Systems

§ 118.400 Where required.

(a) The following spaces must be equipped with a fixed gas fire extinguishing system, in compliance with § 118.410 of this part, or other fixed fire extinguishing system specifically approved by the Commandant, except as otherwise allowed by paragraph (b) of this section:

(1) A space containing propulsion machinery;

(2) A space containing an internal combustion engine of more than 50 hp;

(3) A space containing an oil fired boiler;

(4) A space containing combustible cargo or ship's stores inaccessible during the voyage (a carbon dioxide system must be installed in such a space, and Halon systems are not allowed);

(5) A paint locker; and

(6) A storeroom containing flammable liquids (including liquors of 80 proof or higher where liquor is packaged in individual containers of 9.5 liters (2.5 gallons) capacity or greater).

(b) Alternative system types and exceptions to the requirements of paragraph (a) of this section are:

(1) A fixed gas fire extinguishing system, which is capable of automatic discharge upon heat detection, may only be installed in a normally unoccupied space with a gross volume of not more than 170 cubic meters (6,000 cubic feet);

(2) A pre-engineered fixed gas extinguishing system must be in compliance with § 118.420 of this part and may only be installed in a normally unoccupied machinery space, a paint locker, or a storeroom containing flammable liquids (including liquors of 80 proof or higher where liquor is packaged in individual containers of 9.5 liters (2.5 gallons) capacity or greater), with a gross volume of not more than 57 cubic meters (2,000 cubic feet);

(3) A B-II portable fire extinguisher installed outside the space may be substituted for a fixed gas fire extinguishing system in a storeroom containing flammable liquids (including liquors of 80 proof or higher where liquor is packaged in individual containers of 9.5 liters (2.5 gallons) capacity or greater) or a paint locker, with a volume of not more than 5.7 cubic meters (200 cubic feet);

(4) A space that is so open to the atmosphere that a fixed gas fire extinguishing system would be ineffective, as determined by the cognizant OCMI, is not required to have a fixed gas fire extinguishing system; and

(5) Where the amount of carbon dioxide gas required in a fixed fire extinguishing system can be supplied by one portable extinguisher or a semi-portable extinguisher, such an extinguisher may be used subject to the following:

(i) Cylinders shall be installed in a fixed position outside the space protected;

(ii) The applicator shall be installed in a fixed position so as to discharge into the space protected; and

(iii) Controls shall be installed in an accessible location outside the space protected.

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(c) The following spaces must be equipped with a fire detecting system of an approved type that is installed in accordance with § 76.27 in subchapter H of this chapter, except when a fixed gas fire extinguishing system that is capable of automatic discharge upon heat detection is installed or when the space is manned:

(1) A space containing propulsion machinery;

(2) A space containing an internal combustion engine of more than 37.3 kW (50 hp); and

(3) A space containing an oil fired boiler.

(d) All griddles, broilers, and deep fat fryers must be fitted with a grease extraction hood that complies with § 118.425 of this part.

(e) Except for continuously manned operating stations as allowed by paragraph (f), each accommodation space, control space, and service space must be fitted with the following systems:

(1) A smoke actuated fire detecting system of a type approved by the Commandant that is installed in accordance with § 76.27 in subchapter H of this chapter; and

(2) A manual alarm system that meets the requirements in § 76.35 in subchapter H of this chapter.

(f) On vessels with no overnight accommodation; public spaces that may be assumed to be occupied by a large number of persons when passengers are on board need only be served by a manual alarm system that meets the requirements in § 76.35 in subchapter H of this chapter. The alarm boxes must be located in the vicinity of each required exit, and easily seen in case of need.

(g) An enclosed vehicle space must be fitted with an automatic sprinkler system that meets the requirements of § 76.25 in subchapter H of this chapter; and

(1) A fire detecting system of a type approved by the Commandant that is installed in accordance with § 76.27 in subchapter H of this chapter; or

(2) A smoke detecting system of a type approved by the Commandant that is installed in accordance with § 76.33 in subchapter H of this chapter.

(h) A partially enclosed vehicle space must be fitted with a manual sprinkler

system that meets the requirements of § 76.23 in subchapter H of this chapter.

[CGD 85–080, 61 FR 917, Jan. 10, 1996, as amended at 62 FR 51351, Sept. 30, 1997; USCG–1999–6216, 64 FR 53227, Oct. 1, 1999]

§ 118.410 Fixed gas fire extinguishing systems.

(a) *General.* (1) A fixed gas fire extinguishing system aboard a vessel must be approved by the Commandant, and be custom engineered to meet the requirements of this section unless the system meets the requirements of § 118.420 of this part.

(2) System components must be listed and labeled by an independent laboratory. A component from a different system, even if from the same manufacturer, must not be used unless included in the approval of the installed system.

(3) System design and installation must be in accordance with the Marine Design, Installation, Operation, and Maintenance Manual approved for the system by the Commandant.

(4) A fixed gas fire extinguishing system may protect more than one space. The quantity of extinguishing agent must be at least sufficient for the space requiring the greatest quantity as determined by the requirements of paragraphs (f)(4) or (g)(2) of this section.

(b) *Controls.* (1) Controls and valves for operation of a fixed gas fire extinguishing system must be:

(i) Located outside the space protected by the system; and

(ii) Not located in a space that might be inaccessible in the event of fire in the space protected by the system.

(2) Except for a normally unoccupied space of less than 170 cubic meters (6000 cubic feet), release of an extinguishing agent into a space must require two distinct operations.

(3) A system must have local manual controls at the storage cylinders capable of releasing the extinguishing agent. In addition, a normally manned space must have remote controls for releasing the extinguishing agent immediately outside the primary exit from the space.

(4) Remote controls must be located in a breakglass enclosure to preclude accidental discharge.

(5) Valves and controls must be of a type approved by the Commandant and protected from damage or accidental activation. A pull cable used to activate the system controls must be enclosed in conduit.

(6) A system protecting more than one space must have a manifold with a normally closed stop valve for each space protected.

(7) A gas actuated valve or device must be capable of manual override at the valve or device.

(8) A system, which has more than one storage cylinder for the extinguishing agent and that relies on pilot cylinders to activate the primary storage cylinders, must have at least two pilot cylinders. Local manual controls in compliance with paragraph (b)(3) of this section must be provided to operate the pilot cylinders but are not required for the primary storage cylinders.

(9) A system protecting a manned space must be fitted with a time delay and alarm of a type approved by the Commandant, arranged to require the alarm to sound for at least 20 seconds or the time necessary to escape from the space, whichever is greater, before the agent is released into the space. Alarms must be conspicuously and centrally located. The alarm must be powered by the extinguishing agent.

(10) A device must be provided to automatically shut down power ventilation serving the protected space and engines that draw intake air from the protected space prior to release of the extinguishing agent into the space.

(11) Controls and storage cylinders must not be in a locked space unless the key is in a breakglass type box conspicuously located adjacent to the space.

(c) *Storage space.* (1) Except as provided in paragraph (c)(2) of this section, a storage cylinder for a fixed gas extinguishing system must be:

(i) Located outside the space protected by the system; and

(ii) Not located in a space that might be inaccessible in the event of a fire in the space protected by the system.

(2) A normally unoccupied space of less than 170 cubic meters (6,000 cubic feet) may have the storage cylinders located within the space protected.

When the storage cylinders are located in the space:

(i) The system must be capable of automatic operation by a heat actuator within the space; and

(ii) Have manual controls in compliance with paragraph (b) of this section except for paragraph (b)(3) of this section.

(3) A space containing a storage cylinder must be maintained at a temperature within the range from -30°C (-20°F) to 55°C (130°F) or at another temperature as listed by the independent laboratory and stated in the manufacturer's approval manual.

(4) A storage cylinder must be securely fastened, supported, and protected against damage.

(5) A storage cylinder must be accessible and capable of easy removal for recharging and inspection. Provisions must be available for weighing each storage cylinder in place.

(6) Where subject to moisture, a storage cylinder must be installed to provide a space of at least 51 millimeters (2 inches) between the deck and the bottom of the storage cylinder.

(7) A Halon 1301 storage cylinder must be stowed in an upright position unless otherwise listed by the independent laboratory. A carbon dioxide cylinder may be inclined not more than 30° from the vertical, unless fitted with flexible or bent siphon tubes, in which case they may be inclined not more than 80° from the vertical.

(8) Where a check valve is not fitted on an independent storage cylinder discharge outlet, a plug or cap must be provided for closing the outlet resulting from storage cylinder removal.

(9) Each storage cylinder must meet the requirements of § 147.60 in subchapter N of this chapter, or other standard specified by the Commandant.

(10) A storage cylinder space must have doors that open outwards or be fitted with kickout panels installed in each door.

(d) *Piping.* (1) A pipe, valve, or fitting of ferrous material must be protected inside and outside against corrosion unless otherwise approved by the Commandant. Aluminum or other low melting material must not be used for a

component of a fixed gas fire extinguishing system except as specifically approved by the Commandant.

(2) A distribution line must extend at least 51 millimeters (2 inches) beyond the last orifice and be closed with a cap or plug.

(3) Piping, valves, and fittings must be securely supported, and where necessary, protected against damage.

(4) Drains and dirt traps must be fitted where necessary to prevent the accumulation of dirt or moisture and located in accessible locations.

(5) Piping must be used for no other purpose except that it may be incorporated with the fire detecting system.

(6) Piping passing through accommodation spaces must not be fitted with drains or other openings within such spaces.

(7) The distribution piping of a carbon dioxide fixed gas extinguishing system must be tested as required by this paragraph, upon completion of the piping installation, using only carbon dioxide, compressed air, or nitrogen gas.

(i) Piping between a storage cylinder and a stop valve in the manifold must be subjected to a pressure of 6,894 kPa (1,000 psi), except as permitted in paragraph (d)(7)(iii) of this section. Without additional gas being introduced to the system, the pressure drop must not exceed 2,068 kPa (300 psi) after two minutes.

(ii) A distribution line to a space protected by the system must be subjected to a test similar to that described in paragraph (d)(7)(i) of this section, except that the pressure used must be 4,136 kPa (600 psi). For the purpose of this test, the distribution piping must be capped within the space protected at the first joint between the nozzles and the storage cylinders.

(iii) A small independent system protecting a space such as a paint locker may be tested by blowing out the piping with air at a pressure of not less than 689 kPa (100 psi).

(8) The distribution piping of a Halon 1301 fixed gas extinguishing system must be tested, as required by this paragraph, upon completion of the piping installation, using only carbon dioxide, compressed air, or nitrogen.

(i) When pressurizing the piping, pressure must be increased in small in-

crements. Each joint must be subjected to a soap bubble leak test, and all joints must be leak free.

(ii) Piping between the storage cylinders and the manifold stop valve must be subjected to a leak test conducted as a pressure of 4,136 kPa (600 psi). Without additional gas being added to the system, there must be no loss of pressure over a two minute period after thermal equilibrium is reached.

(iii) Distribution piping between the manifold stop valve and the first nozzle in the system must be capped and pneumatically tested for a period of 10 minutes at 1,034 kPa (150 psi). At the end of 10 minutes, the pressure drop must not exceed 10% of the test pressure.

(e) *Pressure relief.* When required by the cognizant OCMI, spaces that are protected by a fixed gas fire extinguishing system and that are relatively airtight, such as refrigeration spaces, paint lockers, etc., must be provided with suitable means for relieving excessive pressure within the space when the agent is released.

(f) *Specific requirements for carbon dioxide systems.* A custom engineered fixed gas fire extinguishing system, which uses carbon dioxide as the extinguishing agent, must meet the requirements of this paragraph.

(1) Piping, valves, and fittings must have a bursting pressure of not less than 41,360 kPa (6,000 psi). Piping, in nominal sizes of not more than 19 millimeters (0.75 inches), must be at least Schedule 40 (standard weight), and in nominal sizes of over 19 millimeter (0.75 inches), must be at least Schedule 80 (extra heavy).

(2) A pressure relief valve or equivalent set to relieve at between 16,550 and 19,300 kPa (2,400 and 2,800 psi) must be installed in the distribution manifold to protect the piping from overpressurization.

(3) Nozzles must be approved by the Commandant.

(4) When installed in a machinery space, paint locker, a space containing flammable liquid stores, or a space with a fuel tank, a fixed carbon dioxide system must meet the following requirements.

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(i) The quantity of carbon dioxide in kilograms (pounds) that the system must be capable of providing to a space must not be less than the gross volume of the space divided by the appropriate factor given in Table 118.410(f)(4)(i). If fuel can drain from a space being protected to an adjacent space or if the spaces are not entirely separate, the volume of both spaces must be used to determine the quantity of carbon dioxide required. The carbon dioxide must be arranged to discharge into both such spaces simultaneously.

TABLE 118.410(f)(4)(i)

Factor	Gross volume of space in cubic meters (feet)	
	over	Not Over
0.94 (15)	14 (500)
1.0 (16)	14 (500)	45 (1,600)
1.1 (18)	45 (1,600)	125 (4,500)
1.2 (20)	125 (4,500)	1,400 (50,000)
1.4 (22)	1,400 (50,000)

(ii) The minimum size of a branch line to a space must be as noted in Table 118.410(f)(4)(ii).

TABLE 118.410(f)(4)(ii)

Maximum quantity of carbon dioxide required kg (lbs)	Minimum nominal pipe size mm (inches)	Maximum quantity of carbon dioxide required kg (lbs)	Minimum nominal pipe size mm (inches)
45.4 (100)	12.7 (0.5)	1,134 (2,500)	65 (2.5)
102 (225)	19 (0.75)	2,018 (4,450)	75 (3.0)
136 (300)	25 (1.0)	3,220 (7,100)	90 (3.5)
272 (600)	30 (1.25)	4,739 (10,450)	100 (4.0)
454 (1,000)	40 (1.5)	6,802 (15,000)	113 (4.5)
1,111 (2,450)	50 (2.0)

(iii) Distribution piping within a space must be proportioned from the distribution line to give proper supply to the outlets without throttling.

(iv) The number, type, and location of discharge outlets must provide uniform distribution of carbon dioxide throughout a space.

(v) The total area of all discharge outlets must not exceed 85 percent nor be less than 35 percent of the nominal cylinder outlet area or the area of the supply pipe, whichever is smaller. The nominal cylinder outlet area in square millimeters (inches) is determined by multiplying the factor 0.015 (0.0022 if using square inches) by the total capacity in kilograms (pounds) of all carbon dioxide cylinders in the system, except in no case must the outlet area be of less than 71 square millimeters (0.110 square inches).

(vi) The discharge of at least 85 percent of the required amount of carbon dioxide must be completed within two minutes.

(5) When installed in an enclosed ventilation system for rotating electrical propulsion equipment a fixed carbon dioxide system must meet the following requirements.

(i) The quantity of carbon dioxide in kilograms (pounds) must be sufficient

for initial and delayed discharges as required by this paragraph. The initial discharge must be equal to the gross volume of the system divided by 160 (10 if using pounds) for ventilation systems having a volume of less than 57 cubic meters (2,000 cubic feet), or divided by 192 (12 if using pounds) for ventilation systems having a volume of at least 57 cubic meters (2,000 cubic feet). In addition, there must be sufficient carbon dioxide available to permit delayed discharges to maintain at least a 25 percent concentration until the equipment can be stopped. If the initial discharge achieves this concentration, a delayed discharge is not required.

(ii) The piping sizes for the initial discharge must be in accordance with Table 118.410(f)(4)(ii) and the discharge of the required amount must be completed within two minutes.

(iii) Piping for the delayed discharge must not be less than 12.7 millimeters (0.5 inches) nominal pipe size, and need not meet specific requirement for discharge rate.

(iv) Piping for the delayed discharge may be incorporated with the initial discharge piping.

(6) When installed in a cargo space a fixed carbon dioxide system must meet the following requirements.

(i) The number of kilograms (pounds) of carbon dioxide required for each space in cubic meters (feet) must be equal to the gross volume of the space in cubic meters (feet) divided by 480 (30 if using pounds).

(ii) System piping must be of at least 19 millimeters (0.75 inches).

(iii) No specific discharge rate is required.

(7) A lockout valve must be provided on any carbon dioxide extinguishing system protecting a space over 6,000 cubic feet in volume and installed or altered after [July 9, 2013. “Altered” means modified or refurbished beyond the maintenance required by the manufacturer’s design, installation, operation and maintenance manual.

(8) The lockout valve must be a manually operated valve located in the discharge manifold prior to the stop valve or selector valves. When in the closed position, the lockout valve must provide complete isolation of the system from the protected space or spaces, making it impossible for carbon dioxide to discharge in the event of equipment failure during maintenance.

(9) The lockout valve design or locking mechanism must make it obvious whether the valve is open or closed.

(10) A valve is considered a lockout valve if it has a hasp or other means of attachment to which, or through which, a lock can be affixed, or it has a locking mechanism built into it.

(11) The master or person-in-charge must ensure that the valve is locked open at all times, except while maintenance is being performed on the extinguishing system, when the valve must be locked in the closed position.

(12) Lockout valves added to existing systems must be approved by the Commandant as part of the installed system.

(g) *Specific requirements for Halon 1301 systems.* (1) A custom engineered fixed gas fire extinguishing system that uses Halon 1301, must comply with the applicable sections of UL 1058 “Halogenerated Agent Extinguishing System Units,” and the requirements of this paragraph.

(2) The Halon 1301 quantity and discharge requirements of UL 1058 apply, with the exception that the Halon 1301 design concentration must be 6 percent at the lowest ambient temperature expected in the space. If the lowest temperature is not known, a temperature of –18 °C (0 °F) must be assumed.

(3) Each storage cylinder in a system must have the same pressure and volume.

(4) Computer programs used in designing systems must be approved by an independent laboratory recognized by the Commandant.

NOTE TO §118.410(g): As of Jan. 1, 1994, the United States banned the production of Halon. The Environmental Protection Agency placed significant restrictions on the servicing and maintenance of systems containing Halon. Vessels operating on an international voyage, subject to SOLAS requirements, are prohibited from installing fixed gas fire extinguishing systems containing Halon.

(h) Each carbon dioxide extinguishing system installed or altered after July 9, 2013, must have an approved odorizing unit to produce the scent of wintergreen, the detection of which will serve as an indication that carbon dioxide gas is present in a protected area and any other area into which the carbon dioxide may migrate. “Altered” means modified or refurbished beyond the maintenance required by the manufacturer’s design, installation, operation and maintenance manual.

[CGD 85–080, 61 FR 917, Jan. 10, 1996; 61 FR 20556, May 7, 1996, as amended at 62 FR 51351, Sept. 30, 1997; USCG–2000–7790, 65 FR 58462, Sept. 29, 2000; USCG–2006–24797, 77 FR 33883, Jun. 7, 2012]

§ 118.420 Pre-engineered fixed gas fire extinguishing systems.

(a) A pre-engineered fixed gas fire extinguishing system must:

(1) Be approved by the Commandant;

(2) Be capable of manual actuation from outside the space in addition to automatic actuation by a heat detector;

(3) Automatically shut down all power ventilation systems and all engines that draw intake air from within the protection space; and

(4) Be installed in accordance with manufacturer’s instructions.

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(b) A vessel on which a pre-engineered fixed gas fire extinguishing system is installed must have the following equipment at the operating station:

- (1) A light to indicate discharge;
- (2) An audible alarm that sounds upon discharge; and
- (3) A means to reset devices used to automatically shut down ventilation systems and engines as required by paragraph (a)(3) of this section.

(c) Only one pre-engineered fixed gas fire extinguishing system is allowed to be installed in each space protected by such a system.

§ 118.425 Galley hood fire extinguishing systems.

(a) A grease extraction hood required by § 118.400 of this part must meet UL 710 "Exhaust Hoods for Commercial Cooking Equipment," or other standard specified by the Commandant.

(b) A grease extraction hood must be equipped with a dry or wet chemical fire extinguishing system meeting the applicable sections of NFPA 17 "Dry Chemical Extinguishing Systems," 17A "Wet Chemical Extinguishing Systems," or other standard specified by the Commandant, and must be listed by an independent laboratory recognized by the Commandant.

Subpart E—Portable Fire Extinguishers

§ 118.500 Required number, type, and location.

(a) Each portable fire extinguisher on a vessel must be of a type approved by the Commandant. The minimum number of portable fire extinguishers required on a vessel must be acceptable to the cognizant OCMI, but must be not less than the minimum number required by Table 118.500(a) and other provisions of this section.

TABLE 118.500(a)

Space protected	Minimum number required	Type extinguisher permitted		
		CG class	Medium	Min. size
Operating station	1	B-I, C-I	Halon	1.1 kg (2.5 lb)
			CO ₂	1.8 kg (4 lb)
			Dry chemical	0.9 kg (2 lb)
Machinery space	1	B-II, C-II located just outside exit.	Halon	4.5 kg (10 lb)
			CO ₂	6.8 kg (15 lb)
			Dry chemical	4.5 kg (10 lb)
Open vehicle deck	1 for every 10 vehicles	B-II	Foam	9.5 L (2.5 gal)
			Halon	4.5 kg (10 lb)
			CO ₂	6.8 kg (15 lb)
			Dry chemical	4.5 kg (10 lb)
			Foam	9.5 L (2.5 gal)
Accommodation space.	1 for each 232.3 square meters (2,500 square feet) or fraction thereof.	A-II	Dry chemical	4.5 kg (10 lb)
			Foam	9.5 L (2.5 gal)
Galley, pantry, concession stand.	1	A-II	Foam	9.5 L (2.5 gal)
		B-II	Dry chemical	4.5 kg (10 lb)

(b) A vehicle deck without a fixed sprinkler system and exposed to weather must have one B-II portable fire extinguisher for every five vehicles, located near an entrance to the space.

(c) The cognizant OCMI may permit the use of a larger portable fire extinguisher, or a semiportable fire extinguisher, in lieu of those required by this section.

(d) The frame or support of each B-V fire extinguisher permitted by para-

graph (c) of this section must be welded or otherwise permanently attached to a bulkhead or deck.

[CGD 85-080, 61 FR 917, Jan. 10, 1996, as amended at 62 FR 51351, Sept. 30, 1997]

§ 118.520 Installation and location.

Portable fire extinguishers must be located so that they are clearly visible and readily accessible from the space being protected. The installation and

§ 118.600

location must be to the satisfaction of the cognizant OCMI.

Subpart F—Additional Equipment

§ 118.600 Fire axe.

A vessel of more than 19.8 meters (65 feet) in length must have at least one fire axe located in or adjacent to the primary operating station.

PART 119—MACHINERY INSTALLATION

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AUTHORITY: 46 U.S.C. 2103, 3306; E.O. 12234, 45 FR 58801, 3 CFR, 1980 Comp., p. 277; Department of Homeland Security Delegation No. 0170.1.

SOURCE: CGD 85-080, 61 FR 922, Jan. 10, 1996, unless otherwise noted.

Subpart A—General Provisions

§ 119.100 Intent; preemptive effect.

This part contains requirements for the design, construction, installation, and operation of propulsion and auxiliary machinery, piping and pressure systems steering apparatus, and associated safety systems. Machinery and equipment installed on each vessel must be suitable for the vessel and its operation and for the purpose intended. The regulations in this part have preemptive effect over State or local regulations in the same field.

[CGD 85-080, 61 FR 922, Jan. 10, 1996, as amended by USCG-2006-24797, 77 FR 33883, Jun. 7, 2012]

§ 119.115 Applicability to existing vessels.

(a) Except as otherwise required by paragraphs (b) and (c) of this section, an existing vessel must comply with the regulations on machinery, bilge and ballast system equipment, steering apparatus, and piping systems or components that were applicable to the vessel on March 10, 1996, or, as an alternative, the vessel may comply with the regulations in this part.

(b) New installations of machinery, bilge and ballast system equipment, steering equipment, and piping systems or components on an existing vessel, which are completed to the satisfaction of the cognizant Office in Charge, Marine Inspection (OCMI) on or after March 11, 1996, must comply with the regulations of this part. Replacement of existing equipment installed on the vessel prior to March 11, 1996, need not comply with the regulations in this part.